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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,958	06/21/2006	Johan Rune	4208-34	1514

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EXAMINER	
DOAN, KIET M	

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,958	RUNE ET AL.	
	Examiner	Art Unit	
	KIET DOAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *42-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/21/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 42 is objected to because of the following informalities: claim 42, line 1 phrase "based UNITS" should change to "based UMTS". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 42-43, 46, 52-54, 56-61, 64, 70-73, 75-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Niemela (WO 03/049482 A1).

Consider **claims 42, 60, (81, 82** A computer program…**).** Chen teaches a router in an Internet Protocol, IP, based UNITS Terrestrial Radio Access Network, UTRAN, Transport Network within a Universal Mobile Telecommunication System (Paragraphs [0016], [0031] teach UMTS system wherein contain radio network controller, IP, node b), the UTRAN transport network carries Dedicated Channel (DCH) frames on DCHs between a RNC and at least one Node B (Paragraphs [0067-0072).

- *The examiners also notice Chen teaches soft handover and use Marco-Diversity Combining which technique of routing/splitting.*

Chen teaches claimed limitation as discussed above **but is silent on** characterized in that the router comprises means for splitting one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol.

In an analogous art, Niemela teaches characterized in that the router comprises means for splitting one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol (Abstract, Page 3, lines 17-28, Fig.1, Illustrate the RNC as combine and splitting traffic to different transmission paths).

Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify Chen with Niemela's system, such that router in an IP and base UMTS with UTRAN transport network carries Dedicated Channel (DCH) frames on DCHs and the router enables splitting the traffic to provide means for transferring traffic signals in stability and flexibility with cost effectiveness in using internet multicast protocol.

Consider **claims 43, 61**. Chen teaches the router according to claim 42, wherein the router comprises means for replicating each DCH frame and means for transmitting the replicated DCH frames according to the IP multicast protocol (Paragraphs [0066], [0078-0079] teach transport in cyclic redundancy which read on transmitting the replicated DCH frames)

Consider **claims 46, 64**. Chen teaches the router according to claim 42, wherein each DCH traffic flow is assigned a dedicated multicast destination address in one or more of the Node Bs (Paragraphs [0067]).

Consider **claims 52, 70**. Chen teaches the router according to claim 42, wherein the router comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by means of utilization of the multicast address, assigned as the downlink destination address, as the source address of the DCH frames sent in the uplink DCH traffic flows from all participating Node As (Paragraphs [0060-0063]).

Consider **claims 53, 72**. Chen teaches the router according to claim 42, wherein the router comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by retrieving the destination address and the destination port(s) of the uplink flows from the RNC (Paragraphs [0054], [0060-0063]).

Consider **claims 54, 73**. Chen teaches the router according to claim 42, wherein the router comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by using an uplink flow identity implicit in the downlink DCH traffic flow (Paragraphs [0060-0063]).

Consider claims **56, 77** The combination of Chen and Niemela teach the router according to claim 42. Further, Niemela teaches wherein the router comprises means

for combining at least two uplink DCH traffic flows into one single uplink DCH traffic flow (Page 11, lines 1-13).

Consider **claims 57, 78**. The combination of Chen and Niemela teach the router according to claim 56. Further, Chen teaches wherein the means for combining comprises further means for building a new DCH frame from a received set of DCH frames in the at least two uplink DCH traffic flows to be combined, encapsulating the new DCH frame in a UDP packet and sending the UDP IO packet in the uplink direction (Paragraphs [0054], [0060-0063]).

Consider **claims 58, 79**. Chen teaches the router according to claim 57, wherein the means for building the new DCH frame from a received set of DCH frames to be combined comprises further means for including a selected set of Transport Blocks, TBs, in the payload of the new DCH frame, copying the header of the received DCH frames to the new DCH frame, selecting a Quality Estimate, QE, value for the new DCH frame and, if a payload CRC is used, calculating a payload CRC for the new DCH frame (Paragraphs [0074-0080]).

Consider **claims 59, 80**. Chen teaches the router according to claim 42, wherein the router comprises means for estimating a Latest Accepted Time of Arrival,LAToA, for a next set of DCH frames to be combined having a Connection Frame Number n, CFNn, based on the times of arrival of the previous set of frames having a CFN n-1,

means for adjusting the estimates of the LAToA for each new frame adapted to the maximum transport delay that a frame can experience under normal circumstances on its path from the Node B to the combining router (Paragraphs [0063], [0074-0080]).

Consider **claims 71, 75**. Chen teaches the method according to claim 70, comprises the further step of: -identifying an originating Node B of an uplink DCH frame, based on a destination IP address and a destination UDP port assigned by the RNC to the Node B for the uplink of the DCH (Paragraph [0048-0049]).

4. Claims 44-45, 47-51, 55, 62-63, 65-69, 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Niemela (WO 03/049482 A1).

Consider claims **44, 62**. Chen and Niemela teach claimed limitation as discussed above **but is silent on** wherein the IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2.

In an analogous art, Haggerty teach "Multicast switching". Further, Haggerty teaches wherein the IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2 (Col. 6, lines 53-54)

It would have been obvious to one skilled in the art at the time of the invention was made to modify Chen and Niemela with Haggerty's system, such that he IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2 to provide

means for transmit traffic to all member of its destination with the dame quality and reliable.

Consider **claims 45, 63.** The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the IP multicast protocol is Protocol Independent Multicast-Sparse Mode, PIM-SM (Col. 6, lines 53-55).

Consider **claims 47, 65**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the means for splitting further comprises means for identifying a mapping between the RNC and the multicast destination address by using CBTv2 or PIM-SM bootstrap mechanism (Col. 7, lines 45-59, Col. 18, lines 30-35).

Consider **claims 48, 66**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the router comprises means for determining whether the router is a splitting and/or combination router by using the protocol(s) CBTv2 and/or MLD, wherein the protocol(s) are/is arranged to determine the number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.13, lines 56-56).

Consider **claims 49, 67**. The combination of Chen and Niemela and Haggerty

teach the router according to claim 42, wherein the router comprises means for determining whether the router is a splitting and/or combination router by using the protocol(s) PIM-SM and/or MLD wherein the protocol(s) are/is arranged to determine the number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.18, lines 30-36).

Consider **claims 50, 51, 68, 69**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the router comprises means for determining whether the router is a splitting and/or combination router by using the protocol(s) PIM-SM and/or Internet Group Management Protocol, IGMP, wherein the protocol(s) are/is arranged to determine the number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.4, lines 56-63).

Consider **claims 55, 74**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the router comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by modifying the MLD or IGMP protocol and the multicast routing protocol such that the destination port of the uplink is included in the messages that are used to build the multicast tree (Col.5, lines 10-34).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Appiah N. Charles can be reached on ***. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kiet Doan/
Examiner, Art Unit 2617

/Charles N. Appiah/

Supervisory Patent Examiner, Art Unit 2617